



# SUBSTITUTE SPECIFICATION

[Electronic Version 1.2.8]

## [GOLF CLUBS AND A METHOD FOR USING THESE GOLF CLUBS FOR GOLF SHOTS UP TO 100 YARDS FROM THE GREEN]

### Detailed Description

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[0002] This Non-Provisional Patent Application seeks to obtain priority based  
upon Provisional Patent Application 60/407,415 dated August 28, 2002.

[0003] Background of the Invention

1. Field of the Invention. The present invention relates generally to golf clubs and a method for using these golf clubs to propel a golf ball onto the "green" from distances up to 100 yards. More specifically, the invention is a series of unique golf clubs with wooden golf club heads displaying greater than normal and varying loft angles, greater than normal lie angles, shorter club shaft lengths, and a new method for using these unique golf clubs for performing "chip shots"

or hitting a golf ball onto the putting surface or "green" from distances up to 100 yards using the same type of pendulum stroke or swing that is used when putting. This method is referred to as the "Two Stroke Pendulum Half Swing Motion" method throughout this application.

2. Description of the Related Art. Golf clubs with wooden golf club heads are well known and well developed prior art. (For example, see patents numbers 1,703,199, 4,157,830, and 3,980,301). Putters with wooden heads, while not widely used today, do exist in the prior art. (For example, see patents numbers D211585, D414232, and D428952). A recent design patent (D423,617) features a wooden golf club head, but this club appears to be ornamental and does not appear to be functional and/or have utility. The novel and useful invention here is the development of uniquely designed golf clubs with wooden golf club heads that have loft angles and lie angles not currently in use along with a method to use these unique golf clubs for approach or chip shots. In accordance with standard golf parlance, the "loft angle" is defined as the angle between the perpendicular and the face of the club when the bottom of the club head is resting squarely on the ground. Similarly, the "lie angle" is defined as the angle

between the shaft and ground when the club head is resting squarely on the ground.

[0004] SUMMARY OF THE INVENTION. The game of golf generally involves three types of strokes or swings 1)strokes used for teeing off (driver), wood shots (3 and 4 woods), and iron shots (1, 2, 3, 4, 5, 6, 7, 8 and 9 irons); 2)strokes used for approach shots or "chip" or "wedge" shots onto the green from up to 100 yards; and 3)strokes used for "putting" the ball into the hole on the green. Stroke 1) is generally a combination of moderate to extreme leg, arm and wrist motion designed to propel the golf ball in varying arcs for moderate to long distances. Stroke 2) is generally a combination of slight forearm and wrist motion designed to propel the golf ball in relatively high arcs for distances up to about 100 yards. Stroke 3) is generally a "pendulum" style stroke wherein the wrists and forearms are locked and motion is induced by a slight movement of the upper arms. Each one of these strokes or swings must be mastered in order for an individual to be a proficient golfer. Golf is a game that requires intricate and highly precise leg, shoulder, arm, and wrist motions in order to become proficient. It generally takes years of professional lessons and continuous

practice to master the three different types of swings now in general use. Since most golfers do not have the time or money to master these three types of swings, they are always seeking a way to simplify their approaches to the game. The uniquely designed golf clubs with wooden heads with varying degrees of loft angle and lie angle coupled with the Two Stroke Pendulum Half Swing Motion method of using these clubs for approach shots provides that simplified means of improving their golf game without an inordinate expenditure of money or time. Another important facet of this invention is that it allows golfers who have restricted arm, shoulder and/or wrist motion to play and enjoy the game of golf. Among those who have such restricted motion are arthritis sufferers and those who have other degenerative conditions in their arms, shoulders, wrists, hips, knees ankles, etc. The unique design combined with the restricted half swing technique cause the clubs to be more utilitarian and easier to use, like that of a putter. This invention includes a method and clubs that will allow the golfer to utilize the same type of stroke that is used for putting (stroke 3 above) for approach or chip shots. The invention has the overall effect of reducing the number of types of swings that a golfer is required to master from the three listed above to two 1) drivers, woods and irons shots and 2) approach and

putting shots. The golf clubs comprising this invention include clubs with three different wooden golf club heads with "loft angles" which vary between: 1) 34 and 41 degrees; 2) 42 and 47 degrees; and 3) 48 and 55 degrees. The three golf club heads are attached via normal means to metal golf club shafts. Another important facet of this invention is that the metal golf club shafts are shorter than the normal metal shafts that are associated with drivers, 2, 3 and 4 woods. The shafts are between 34.5 and 37.5 inches long and are similar in length to those of putters. In the interest of simplicity, the wooden golf club head with loft angles between 34 and 41 degrees will be referred to as the "38 degree club head"; the wooden golf club head with loft angles between 42 and 47 degrees will be referred to as the "44 degree club head" and the wooden golf club head with loft angles between 48 and 55 degrees will be referred to as the "50 degree club head". Each club head consists of three primary parts: a wooden base module, a metallic base plate that is affixed to the base module by at least two metallic screws, and a plastic strike plate insert that is glued to the wooden base module. The faces of these three club heads are uniquely designed in that there is an insert in the face that is generally made of plastic or some other "soft" material that results in a softer, less elastic contact when striking the ball than

would normally occur. The softer contact results in a golf ball not traveling as far as would occur if no soft material were present. All these uniquely designed clubs are lighter than wooden drivers, 2 and 4 woods due to the reduced mass in the club head and shorter club shafts, therefore allowing golf balls to exhibit a softer landing on the green. Another unique facet of the invention is that the "lie angle" is greater than is normally seen in drivers, 2 and 4 woods. Specifically, the lie angle of the claimed clubs is between 66 and 70 degrees. This results in the clubs being easier to use than normal woods or irons since they are more like putters. The method component of the invention is the utilization of the putting golf stroke with additional force (i.e. a "harder" swing) for approach or chip shots. Specifically, this stroke entails virtually no wrist motion; no arm motion; and varying, but slight amounts of shoulder motion, depending on how far from the green the golfer is. In addition, the golfer should grip the club with a putting grip on the golf club; position himself/herself such that the ball is at or near the golfer's front or lead foot; use little to no wrist motion; use little to no arm motion; and have little to no follow through on the swing. This method is referred to as the Two Stroke Pendulum Half Swing Motion. While the distances optimally achievable with each club will vary for each individual golfer, the 38

degree club head club can be used for distances up to 100 yards from the hole; the 444 degree club head club can be used for distances up to 70 yards from the hole; and 50 degree club head club can be used for distances up to 40 yards from the hole. The combination of the Two Stroke Pendulum Half Swing Motion and these unique high loft angle clubs results in extraordinary height flight that is not achievable with metal face clubs or any other clubs currently available. The PUTM clubs combined with the Two Stroke Pendulum Half Swing Motion has proven to be an especially effective means of striking and directing a golf ball when the ball is located in areas where the grass is higher known as the "rough" area of the course. The wide, flat bottoms of the PUTM club heads allow the PUTM clubs to move through the higher grass in the rough much easier than does an iron or a wedge, thereby allowing the golfer to exercise greater control over his or her approach shots. The Two Stroke Pendulum Half Swing Motion is a simple method of learning the game of golf's most difficult area the "short game" within 100 yards of the hole. "Short game" strokes comprise approximately sixty percent of the shots of any particular round of golf. The "short game" is the most difficult facet of the game to master in that it requires the most accuracy and finesse. The Two Stroke Pendulum Half Swing Motion

method allows the player to use the same method from distances of 100 yards all the way to the hole.

[0005]           SALES OF PUTM GOLF CLUBS. The PUTM golf clubs and an instructional video explaining the use of the Two Stroke Pendulum Half Swing Motion have been on sale since approximately three months after the Provisional Patent Application regarding the clubs and method of using them was submitted in August 2002. The PUTM clubs are on sale in approximately twenty different pro shops in various locations throughout the United States. To date, approximately 700 clubs have been sold. There have been no indications from any of the purchasers that the clubs were similar to other clubs, thereby attesting to the uniqueness of the product.

[0006]           BRIEF DESCRIPTION OF THE DRAWINGS.

Figure 1. This figure shows an overview 10 of one of the representative golf clubs used in the "Two Stroke Pendulum Half Swing Motion" or "PUTM" method. The figure shows a golf club shaft 20 with a handle grip 30 over the upper portion of the shaft 20. The figure further shows the unique golf club head 40



including the strike plate insert 50 and the base plate 60. As indicated elsewhere in this application, the unique features of this club include the larger than normal loft angle of the golf club face 55 and the shorter than normal length of the metal golf club shaft 20.

**Figure 2.** This figure shows a closer view of the club head 70 of the 50 degree club; the 50 degree loft angle 75; the strike plate insert 80 and the base plate 90.

**Figure 3.** This figure shows a closer side view of the club head 70 of the 50 degree club and the base plate 90. Note the 50 degree loft angle 75 as measured from the vertical is much more evident in this view.

**Figure 4.** This figure shows a closer view of the club head 100 of the 44 degree club; the 44 degree loft angle 105; the strike plate insert 110 and the base plate 120.

**Figure 5.** This figure shows a closer side view of the club head 100 of the 44 degree club and the base plate 120. Note the 44 degree loft angle 105 as measured from the vertical is much more evident in this view.

**Figure 6.** This figure shows a closer view of the club head 130 of the 38 degree club; the 38 degree loft angle 135; the strike plate insert 140; and the base plate 150.

**Figure 7.** This figure shows a closer side view of the club head 130 of the 38 degree club and the base plate 150. Note the 38 degree loft angle 135 as measured from the vertical is much more evident in this view.

**Figure 8.** This figure is an exploded close up view of the three major components of the wooden golf club head including the base module 160; the strike plate insert 170 and the base plate 180. The loft angle 165 is more evident in this figure.

[0007] DESCRIPTION OF THE PREFERRED EMBODIMENTS. The preferred embodiment of the invention is a series of three wooden golf club heads with loft angles between 34 and 55 degrees and unique lie angles. The golf club heads comprising this invention are three wooden golf club heads with "loft angles" which vary between: 1) 34 and 41 degrees with a preferred loft angle of 38 degrees; 2) 42 and 47 degrees with a preferred loft angle of 44 degrees; and 3) 48 and 55 degrees with a preferred loft angle of 50 degrees respectively. The golf club heads are made of a hard wood such as Persimmon or any other hard wood, with the preferred wood being Persimmon. The wooden golf club heads are attached to metal golf club shafts by normal means. The metal golf club

shafts are standard products, with the exception that they are several inches shorter than metal shafts for drivers, 2, 3, and 4 woods. The strike plate inserts are preferably made of plastic, with the ABS Plastic insert being the preferred insert. The lie angles associated with these golf clubs vary between 66 and 70 degrees with the preferred angle being 68 degrees. The method for using the invention is comprised of the golfer gripping the golf club containing one of the three unique golf club heads in much the same manner as the golfer would grip a putter. The golfer uses the same type of stroke to strike the ball as he or she would use while putting. However, depending on how far the golf ball is from the green, the golfer will be required to apply more force in order to reach the green. The key is that the stroke motion is essentially the same as would be used for putting. The ideal stroke is one in which the impetus is provided primarily by slight shoulder motion. In particular, it is vital that very little or no "wrist break" occur during the stroke and virtually no arm motion. In addition, the golfer should ideally grip the PUTM golf club with the same type of grip that would be used while putting and not the slightly different type of grip that would be used when striking the ball with a seven or eight iron. In addition, the ball should be positioned as it would be when putting i.e. the ball should be positioned close to

the front foot. Finally, it is important that very little follow through occur during the stroke. The optimal stroke "stops short" in the follow through. The unique methodology is referred to as the "Two Stroke Pendulum Half Swing Motion" or "PUTM" method. The inventors have produced a seven minute videotape entitled "The PUTM 50 degree Scoring Wedge Seven Minutes to Success" to further illustrate the method of using the unique golf clubs. A golf pro provides instruction during the videotape. An alternative embodiment of the invention is to utilize golf clubs with metal golf club heads with loft angles between: 1) 34 and 41 degrees with a preferred loft angle of 38 degrees; 2) 42 and 47 degrees with a preferred loft angle of 44 degrees; and 3) 48 and 55 degrees with a preferred loft angle of 50 degrees respectively and lie angles between 66 and 70 degrees with a preferred lie angle of 68 degrees. The metallic heads are made of a light, sturdy metal such as titanium or aluminum or alloys thereof. The metallic heads are hollowed out to some extent in order to make the weight of the metallic club heads roughly equal to that of the wooden golf club heads.

## Claims